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| 09/764,561 | 01/17/2001 | Robert Wayne Glenn JR. | 8386 | 6898 |

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THE PROCTER & GAMBLE COMPANY
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EXAMINER

SHEIKH, HUMERA N

ART UNIT PAPER NUMBER

1615

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/764,561

Applicant(s)

GLENN ET AL.

Examiner

Humera N. Sheikh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,12-15,22-25,41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,12-15,22-25,41 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

Receipt of Applicant's Amendment and Remarks/Arguments filed 07/14/04 and the Information Disclosure Statement (IDS) filed 08/06/04 is acknowledged.

Claims 1, 3-9, 12-15, 22-25, 41 and 42 are pending. Claim 1 has been amended. Claims 1, 3-9, 12-15, 22-25, 41 and 42 are rejected.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 has been amended to recite in part (iv) "*wherein the liquid emulsifiable concentrate of a reactive agent is anhydrous.*" It is unclear what Applicant is intending to convey by this phrase limitation. The specification at page 4 states, "e.g., as an oil-in-water emulsion, is achieved by formulating the reactive agent within an anhydrous formulation, using an organic solvent that is water miscible...". However, instant claim 1 in part (ii) recites the use of a 'water-immiscible solvent'. Clarification is requested.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-9, 12-15, 22-25, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gough *et al.* (US Pat. No. 5,525,332) in view of Deppert *et al.* (US Pat. No. 5,087,733).

Gough teaches a cosmetic treatment composition of substrates comprising a polymer with a silicone functional group (polymer of the claimed “electrophilic reactive group”) (see reference cols. 12-13). The polymer is used in cosmetic preparations (emulsions) for conditioning of the hair and is provided incorporating an azalactone-functionalized copolymer consisting of vinyl azalactone and methacryloyl polydimethylsiloxane monomers (see abstract and cols. 7-8). A method of treating a substrate with a cosmetic agent to impart cosmetic benefits is also taught, comprising (a) providing the cosmetic agent as molecules thereof having chemically bonded thereto at least one azalactone substituent moiety for reaction with a nucleophilic reactive site on the substrate and (b) applying the azalactone functionalized cosmetic agent to the substrate to effect reaction of the or each azalactone moiety with a respective nucleophilic reactive site on the substrate, whereby the molecules are chemically bonded to the substrate to impart cosmetic benefits (col. 3, lines 21-35).

The azalactone functionalized cosmetic agent is present in the composition in an amount from about 0.00001 to 20% by weight of the composition (instant claims require ~ 0.01% to ~ 20%) (see col. 8, lines 64-66).

Solvents include volatile or non-volatile silicones and hydrocarbons (col. 8). Emulsifiers are used to stabilize the emulsified particles (col. 9, lines 12-20). Surfactants (anionic, nonionic, amphoteric, and/or zwitterionic) may be used singularly or in combination and are present in a total amount of from about 1 to about 40% by weight (instant claims require from ~ 2 to ~ 40%). Suitable anionic surfactants include alkyl sulphates and alkyl ether sulphates, whereby the alkyl ether sulphates, alkyl ether phosphates and alkyl ether carboxylates may contain an average of from 1 to 10 ethylene oxide or propylene oxide units per molecule, and preferably containing 2 to 3 ethylene oxide units per molecule on average. Nonionic surfactants suitable for use include condensation products of aliphatic (C₈-C₁₈) primary or secondary linear or branched chain alcohols or phenols with alkylene oxides, usually ethylene oxide and generally having from 6 to 30 ethylene oxide groups (col. 9, line 21- col. 10, line 32).

Additional cosmetic agents that may be included are conditioning agents, styling/setting/bodying agents, fiber straightening agents, colorants, dyeing agents, etc. Examples of conditioning agents include cationic surfactants, cationic polymers, volatile and/or non-volatile silicones and derivatives thereof, *fatty alcohols* and mixtures thereof (col. 10, line 33 – col. 11, line 12). The compositions demonstrate enhanced deposition of the polymer by way of reaction if the functional group with the nucleophilic group is on the substrate.

Group is silent as to a nucleophilic reactive group of a thiol type reactive agent.

Deppert teaches such a reactive agent at Example IV, column 6. Such thiol reactive agents are used in conditioning of hair substrates. Due to their molecular structure, the molecules are capable of forming covalent bonds with the sulfhydryl radicals of the hair (see col. 9). Conventional additives including surfactants and emulsifying agents are included at col. 10.

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of *Deppert* within the teachings of *Gough* because both *Deppert* and *Gough* teach that similar effective conditioning results could be achieved and both teach that the claimed polymers are useful due to their chemical affinity to substrates including hair. The expected result would be an effective hair conditioning formulation for the treatment of hair.

Regarding the instant percentages and/or amounts, it is the position of the Examiner that one of ordinary skill in the art would be capable of determining suitable amounts or percentages through the use of routine or manipulative experimentation to obtain the best possible results, as these are variable parameters.

Response to Arguments

The applicant's arguments filed 07/14/04 have been fully considered, but were not found to be persuasive.

Firstly, Applicant argued, "In the present invention, it has been surprisingly found that this specific surfactant system enables the anhydrous liquid emulsifiable concentrate to achieve the low interfacial tension self/spontaneous emulsification. The liquid emulsifiable concentrates,

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which are anhydrous, enable isolation upon storage for acceptable chemical shelf stability while still enabling emulsion delivery with minimal inconvenience to the consumer.”

This argument has been fully considered, but was not found to be persuasive. The argument that the instant ‘emulsifiable concentrates provide for acceptable chemical shelf stability’ is not persuasive since the prior art desires stable emulsions wherein the one or more functionalized cosmetic agents are designed to be water-insoluble. The prior art also contains surfactants that provide detergent action as well as imparting cosmetic benefits and can also enhance the ease of reaction of the azalactone functional group with the nucleophilic group on the substrate.

Secondly, Applicant argued, “Neither of the references teach the use of liquid emulsifiable concentrate of a reactive agent, which is anhydrous, as presently amended. Gough only teaches surfactants for use within an aqueous composition. Moreover, in Gough’s non-aqueous examples (Examples 1-3) comprising toluene, no surfactants are included.”

This argument has been fully considered, but was not found to be persuasive. While the reference suggests functionalized cosmetic agents in conventional cosmetic types, such as aqueous-based emulsions or solutions, the art does not entirely exclude the use of non-aqueous formulations, as admitted by Applicant’s statement referring to Gough’s non-aqueous Examples 1-3. Moreover, the art makes reference to hydroxyl groups at the substrate surface that may become more important for reaction with the azalactone functionalized cosmetic agent under non-hydrolytic solvent conditions, e.g., in *non-aqueous*, non-alcoholic solvents (col. 3, lines 60-64).

Lastly, Applicant argued, "Deppert only teaches surfactants for use within an aqueous composition. Gough does not teach the specific combination of a C8-C16 ethoxylate with 2-7 ethoxylates with a dispersing aide selected from one or more of a C5-10 alcohol. The Examiner has not provided the requisite motivation to modify either the Gough or Deppert reference so as to obtain Applicant's invention. Gough and Deppert teach surfactants in an aqueous-based composition system. Neither Gough nor Deppert establish a *prima facie* case of obviousness."

These arguments have been fully considered, but were not found to be persuasive. Gough teaches the use of fatty alcohols at col. 10. Deppert additionally teaches the use of benzyl alcohol and cetyl alcohol at cols. 13 and 14. The art is expressly suggestive of aqueous as well as non-aqueous formulations. The Examiner has clearly established a *prima facie* case of obviousness, since the prior art clearly teaches cosmetic compositions that comprise ingredients, such as those instantly claimed (*i.e.*, reactive agents, surfactants, solvents, alcohols) in similar or overlapping amounts as claimed. The art teaches enhanced deposition of polymers by way of reaction if the functional group with the nucleophilic group is on the substrate. Ample motivation has been provided by the prior art to obtain stable cosmetic formulations since the art teaches similar ingredients, used in the same field of endeavor to solve the same problems as also desired by Applicants. Accordingly, the instant invention is rendered *prima facie* obvious over the cited art of record.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday through Friday from 8:00A.M. to 5:30P.M., alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

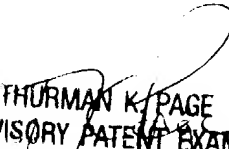
H. N. Sheikh



Patent Examiner

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November 01, 2004



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